HP Cache Server Appliance sa2100/sa2150/sa2200/sa2250 Getting Started Guide

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Audience Assumptions

This guide is for the person who installs, administers, and troubleshoots network infrastructure products. Hewlett-Packard Company assumes you are qualified in the servicing of computer equipment and trained in recognizing hazards in products with hazardous energy levels.

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1 Controls, Ports and Indicators

Before operating your HP Cache Server Appliance, familiarize yourself with the appliance's controls, ports, and indicators as described in this chapter.

The HP Cache Server Appliance hardware configuration and software has been optimized at the factory. The power, LAN, and serial ports are the only connections that are supported. Please contact your HP authorized reseller or HP Support directly for more information.

NOTE	This appliance carries a *whole unit* exchange warranty. The hardware, operating system and cache software have been optimized at the factory. No upgrades or replacement of the CPU, drives, memory or any other component are supported**.**

Front Panel

The front panel of the HP Cache Server Appliance provides the controls and indicators commonly used when operating the appliance.

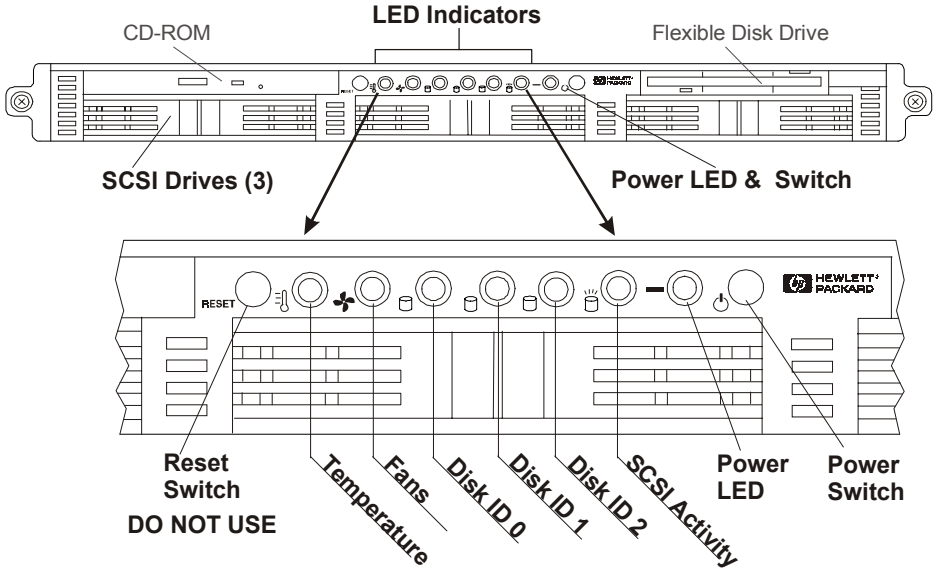


Figure 1-1. sa2100/sa2150 Front Panel

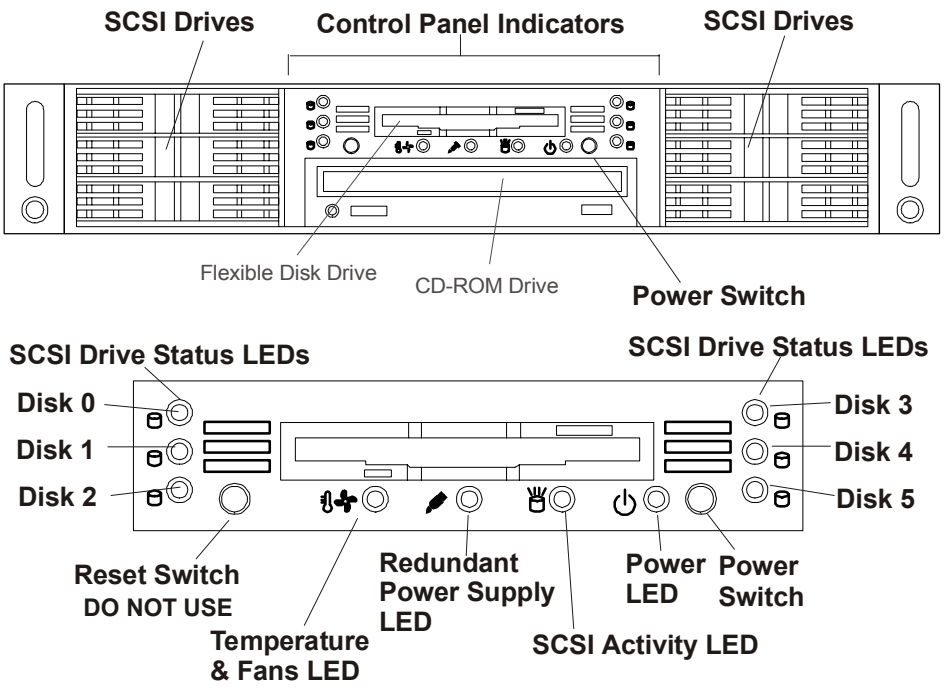


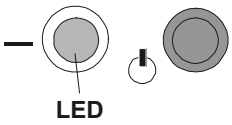
Figure 1-2. sa2200/sa2250 Front Panel

Switches and LED Indicators

Table 1-1 describes the power switch, reset switch and LED indicators located on the front panel.

Table 1-1. Power Switch and Indicators

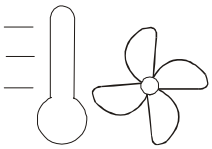
Control/Indicator	Description
Power On/Off Switch	This push-button switch turns the HP Cache Server Appliance power On or Off. Shut down the appliance as described in "Powering-Down the Appliance" before powering down with the power switch.

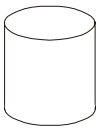
On/Off LED  	This green LED provides the power state of the appliance: • **Steady Green** when the appliance is operating normally • **Off** (unlit) when the appliance is powered off or in standby
Reset Switch 	**DO NOT USE THE RESET SWITCH**. Always power the appliance down as described in "Powering-Down the Appliance". Use of the reset switch will cause an ungraceful shutdown of the appliance that may damage the file system or cause the appliance to fail.

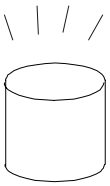
Component Indicators

Table 1-2 describes the front panel component LED indicators.

Table 1-2. Component Indicators

LED ICON	Description
Temperature/Fan LED 	This LED indicates the system temperature and fan speed status: • **Steady Green** indicates normal temperature and fan speed. • **Alternating Red/Green** indicates temperature has exceeded the warning threshold or the fan speed has fallen below the warning threshold. • **Steady Red** indicates temperature has exceeded the critical threshold or the fan speed has fallen below the critical threshold.
RPS LED 	This LED indicates the status of the Redundant Power Supply system (sa2200/sa2250 only): • **Steady Green** for normal operation. • **Alternating Red/Green** for warning condition indicating that the power supply system is not functioning correctly. • **Steady Red** indicates a bad power supply.

SCSI Drive Status LEDs 	These LEDs indicate the state of the respective SCSI disk drive: • **Off** for SCSI drive not present. • **Steady Green** for SCSI drive present. • **Alternating Red/Green** (fast blink) for a SCSI drive identify. • **Steady Red** for SCSI drive failure.

SCSI Activity LED 	This LED indicates SCSI Hard Disk activity: • **Flickering Green** when there is SCSI activity. • **Off** when there is no power or SCSI activity.

Rear Panel

The connectors and ports are located on the rear panel of the HP Cache Server Appliance are illustrated in Figures 1-3 and 1-4.

The following is a list of the connectors and ports that are used by the HP Cache Server Appliance. The other connectors and ports on the rear panel are not required.

- The power connector accepts a standard power cable to connect the HP Cache Server Appliance with a UPS or site power source. A second power supply for redundancy is installed in the sa2200/sa2250. Each power supply has its own power cord connection.
- The serial port labeled "Serial/Management Port" is a standard serial port that can be used to attach a laptop or PC for console-based configuration as described in Chapter 3.
- The dedicated serial port (Serial B) on the sa2200/sa2250 is a standard serial port that can also be used to attach a laptop or PC for console-based configuration as described in Chapter 3.
- The two LAN ports (LAN A and LAN B) are for the embedded network adapters based on Intel's 82559 10/100 BaseT Fast Ethernet adapter. Each LAN port has a RJ-45 LAN connector and two LEDs to indicate LAN speed

and valid connection or activity. Table 1-3 describes the LAN LED indicators.

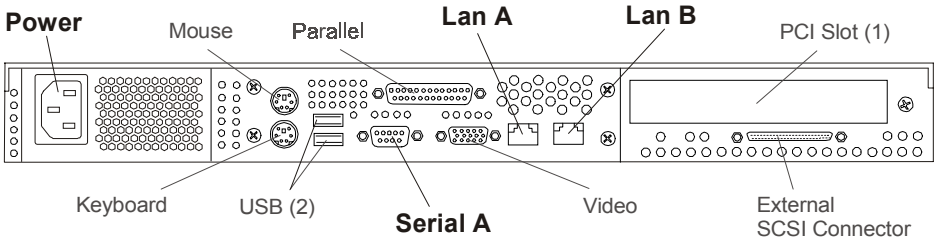


Figure 1-3. sa2100/sa2150 Rear Panel and Ports

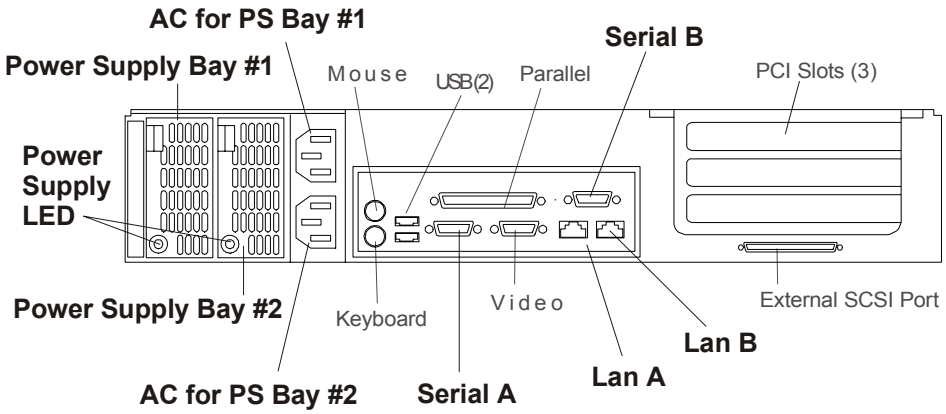
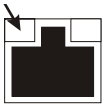
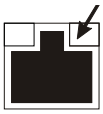


Figure 1-4. sa2200/sa2250 Rear Panel and Ports

LED Indicators

Table 1-3. Rear Panel LED Indicators

Indicator	Definition
Power Supply LED	Each power supply module has a status LED: • **Steady Green** indicates the power supply module is powered up and operating normally. • **Flashing Green** indicates that AC current is present and the power supply module is in standby mode (HP Cache Server Appliance is powered off). • **Steady Amber** may indicate a power module failure, a system over-current condition, a blown fuse in the power supply module or cage, or that no AC is present. • **Off** indicates the AC line cord is unplugged from all installed power modules.
Link LED 	This LED is the activity/link indicator: • **Steady Green** indicates a valid LAN link. • **Flashing Green** indicates there is LAN activity.
LAN Speed LED 	This LED is the LAN speed indicator: • **Steady Amber** shows LAN is operating at 100 Mbps LAN speed • **Off** shows LAN is operating at 10 Mbps LAN speed

Applying Power to the Appliance

Powering-Up the Appliance

1. Ensure that the HP Cache Server Appliance's power cord and network cables are connected prior to powering on the appliance.
2. Press the Power push-button on the front control panel.

   When you press the power button on the control panel, the appliance powers up and loads the operating system. The system runs a set of power on self-tests (POST) during this process.

Powering-Down the Appliance

- Schedule the power down for a time when it will affect the least users.
- Before powering down, insure that the Traffic Server settings have been backed up by using the Snapshots button in Traffic Manager as described in the *HP Cache Server Appliance Administrator Guide*.

WARNING	The HP Cache Server Appliance MUST be shut down through a telnet or VT100 serial session before powering down with the power switch, reset switch or by removing the power cable.

1. Shutdown the appliance by establishing a telnet or serial port connection and selecting **shutdown**.
2. Once the disk activity LED stops blinking (about 1 minute) it is safe to turn the appliance off with the power switch.

Connecting AC Power to Multiple-Server Configurations

The HP Cache Server Appliance temporarily draws a large "inrush current" when first connected to an AC power source. This also occurs when the appliance is in a standby mode (power is turned off, but the power cord is plugged into AC power). The inrush current is much greater than the appliance's normal operating current.

The AC power source can handle the inrush current under normal circumstances. However, the following factors must be considered when installing several HP Cache Server Appliances on one circuit:

- If there is a power failure and power is then restored, all the servers immediately begin to draw inrush current at the same time.
- If the circuit breakers on the incoming power line have insufficient capability, the breaker may trip and thus prevent the servers from powering up.

When preparing your site for installation, allow for the additional inrush current. Refer to Table A-1, "System Power Specifications," in Appendix A.

2 Rack Mounting

The HP Cache Server Appliance can be rack mounted in a variety of 2 and 4 post racking configurations. The appliances are shipped with the rails needed for 4 post racking configurations already installed.

NOTE	Read the complete racking instructions in the *HP Cache Server Appliance sa2100/sa2150 and sa2200/sa2250 Rack Mounting Supplements* on your documentation CD-ROM before attempting to rack mount these appliances.

General racking information is included on the label on the top of the appliance. More detailed racking information, including the use of additional rack mounting hardware for alternative rack mounting (such as two-post racking), can be found in the *HP Cache Server Appliance sa2100/sa2150 and sa2200/sa2250 Rack Mounting Supplements*.

3 Configuring the Cache Appliance

This chapter describes the initial configuration process required to install the cache appliance on the network.

Overview

The following is an overview of the configuration steps:

1. Configure initial network parameters for LAN A of the appliance
   a. through DHCP/bootp

      - OR -

   b. via a VT100 serial console session
2. Accept the settings thereby starting the Traffic Server application.
3. Additional network parameters can be configured through a telnet or VT100 serial session.
4. Use Traffic Manager to customize the cache proxy settings. Access Traffic Manager by directing your browser to: http://<appliance_IP_address>:8081 where 8081 is the default traffic manager port.

Information You Will Need

- A fully qualified hostname; i.e., `webproxy.ca.hp.com`
- IP address
- Subnet mask
- Gateway IP address
- Primary DNS IP address
- You will be prompted to establish an optional telnet access user name and password

Configuring Initial Network Parameters for LAN A

If the appliance has received an IP address through bootp or DHCP and you know the IP address, you may use telnet to access the initial configuration session. (The MAC address is printed on a label on the right side of the appliance as viewed from the front or on the RJ45 connector.)

1. Telnet to the appliance IP address and use **hpsaconfig** for the user name and **hpsa** for the password.
2. Once you establish the telnet session, follow the prompts on the screen to complete the initial configuration.

CAUTION	The `hpsaconfig` user will be deleted when the initial configuration is successfully completed. If a telnet access user name and password is not supplied during the initial network configuration, you will not be able to access the appliance with telnet. Access to the appliance will always be available through a serial VT100 session in case you do not supply a telnet access user name and password at initial configuration and later wish to configure one.

If the appliance did not receive an IP address through bootp or DHCP:

1. Access the initial configuration session with a VT100 terminal session over a serial cable.
2. Connect your client PC serial port to the serial port on the appliance with the serial cable provided with the appliance.
3. Configure the terminal software (such as HyperTerminal on a Microsoft Windows-based client) to connect using the appropriate com port. Set the port speed to 9600, 8 data bits, no parity, 1 stop bit, and no flow control.
4. Press **Enter** on the client PC to establish the initial configuration session.
5. When prompted, login to the appliance using the user name **hpsaconfig** and the password **hpsa**.
6. Follow the prompts on the screen to complete the initial configuration.

Once in the initial network configuration, *you will be prompted to create a telnet access account by supplying a user name and password*. You must create this user name and password in order to have telnet access to the appliance after this initial configuration session. Several Traffic Server management tasks require telnet access.

Upon successful completion of the initial configuration, the appliance will start and configure the Traffic Server software to run with the network settings just entered.

NOTE	After the initial configurations are saved, the network parameters will be saved as a static configuration on the appliance. This is true even if the appliance received the initial IP configuration via bootp or DHCP. DHCP and bootp will be disabled on the appliance after the initial network configuration is complete.

Supplemental Configuration

Once you have completed the initial configuration, the HP Cache Server Appliance will be operating with default settings as a proxy cache server. Clients may configure their browsers to use the appliance as their proxy server at this point with the default proxy port of 8080; however, you may wish to make further configuration and customization changes.

Configuring the Traffic Server caching application can best be accomplished as described in the *HP Cache Server Appliance Administrator Guide* by directing a browser to: http://<appliance_IP_address>:8081 where 8081 is the default port for administration using Traffic Manager.

To access any of the system-level functionality listed below, telnet to the appliance using the telnet access user name and password that was entered during initial configuration (see “Configuring Initial Network Parameters for LAN A” for details).

The following activities may be performed through the Configuration menu:

- Change network configuration for the network adapters
- Change the hostname of the appliance
- Set date, time, and time zone
- Change the console port user name and password
- Shutdown and restart
- Restore factory defaults
- Obtain shell access to run commands required to manage Traffic Server

Monitoring Traffic Server

Once Traffic Server is up and running, you can monitor and modify its operation from the Traffic Manager Dashboard. The Dashboard is shown in Figure 3-1.

Access Traffic Manager by directing your browser to: http://<appliance_IP_address>:8081 where 8081 is the default traffic manager port.

The *HP Cache Server Appliance Administrator Guide* describes how to use Traffic Manager.

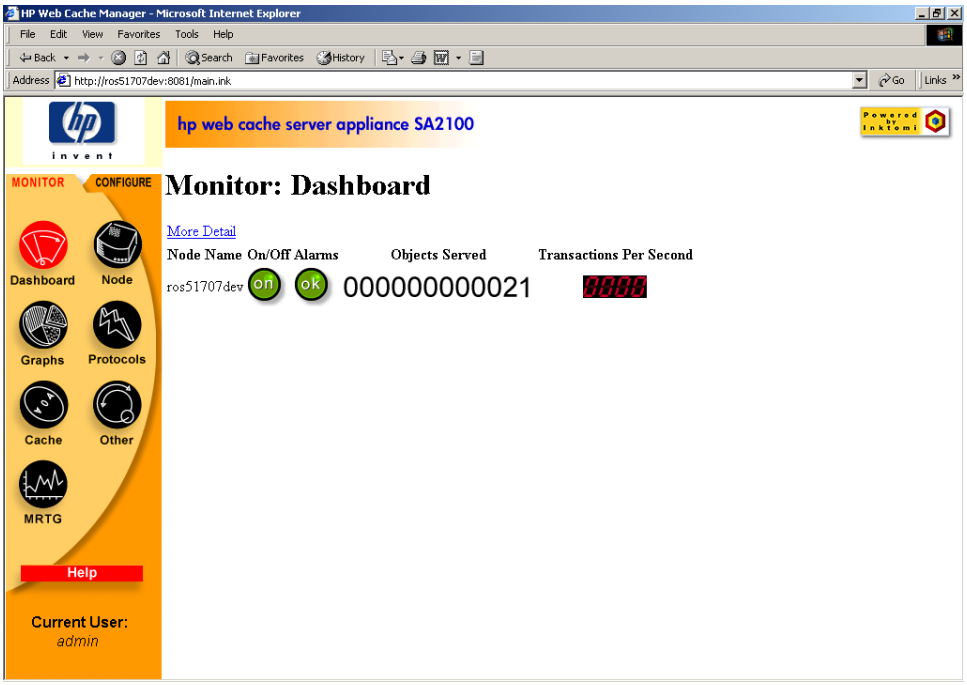


Figure 3-1. Traffic Server Dashboard

4 Online Documentation CD-ROM

The *HP Server Appliance Documentation CD-ROM* contains the entire set of documentation for your HP Cache Server Appliance. The CD-ROM provides a web-based interface that allows you to quickly locate information.

To use this CD-ROM you must have a browser (either Microsoft Internet Explorer 4.x (or greater), or Netscape Navigator version 4.x (or greater) and Adobe Acrobat Reader version 3.x or greater.

The CD-ROM may be accessed in one of the following ways:

- the CD-ROM should start automatically when inserted into a PC

  - OR -

- point your browser to **index.htm** under the **start** directory of the CD-ROM.

5 Troubleshooting

DO NOT remove the cover from the HP Cache Server Appliance. There are no upgradeable or customer-replaceable parts inside the appliance.

NOTE	This appliance carries a *whole unit* exchange warranty and no upgrades or replacement of CPU, drives, memory, or any other components are supported.

For troubleshooting information go to:
http://www.hp.com/serverappliances/support

A Specifications

This appendix provides the power requirements, operating conditions (environmental requirements), physical requirements and hardware specifications of the HP Cache Server Appliance.

Requirements

The following tables provide the specifications required for normal operation of the HP Cache Server Appliance.

Table A-1. System Power Specifications

Parameter	Characteristics
Input Type	Universal input
Input Range	100 to 240 VAC at 50/60 Hz
Operating Current	
sa2100/sa2150	2.6 Amps at 100 VAC
	2.1 Amps at 120 VAC
	1.3 Amps at 200-208 VAC
	1.2 Amps at 230-240 VAC
sa2200/sa2250	4.3 Amps at 100-127 VAC
	2.2 Amps at 200-240 VAC
Inrush Current	
sa2100/sa2150	65 Amps
sa2200/sa2250	60 Amps
Operating Power	
sa2100/sa2150	AC Input: 266 W maximum continuous power
sa2200/sa2250	AC Input: 260W maximum continuous power

Table A-2. Environmental Requirements

Parameter	Conditions
Temperature	
Operating	5° to 35° C (41° to 95° F)
Non-operating	-40° to +65° C (-40° to +149° F)
Humidity	
Operating	20% to 80% relative humidity, non-condensing
Non-operating	5% to 95% relative humidity, non-condensing
Altitude	
Operating	-30 to 3,045 m (10,000 ft)
Non-operating	-30 to 12,180 m (40,000 ft)
Thermal Output	
sa2100/sa2150	maximum operating: 867 BTU/hr
sa2200/sa2250	maximum operating: 1,365 BTU/hr

Table A-3. Weight and Dimensions

Parameter	Conditions
sa2100/sa2150	
Weight	32 lbs. (14.5 kg)
Height	1.75 inches (44.5 mm)
Width	16.8 inches (428 mm)
Depth	23 inches (585 mm)
sa2200/sa2250	
Weight	38 lbs. (17.3 kg)
Height	3.36 inches (85.4 mm)
Width	16.8 inches (428 mm)
Depth	23.3 inches (591 mm)

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